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Will global warming “chill” the U.S. economy?

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Besides damaging the environment and biological systems, climate change is projected to critically damage world economies, with the extent of the damage correlating with the rise in global temperature. In “Ten facts about the economics of climate change and climate policy,” The Hamilton Project and the Stanford Institute for Economic Policy Research (October 23, 2019), the authors of this paper, lay out 10 briefs, along with charts, maps and tables. In these briefs, they summarize the main economic costs of global warming and some possible solutions to minimize its impact.

The paper outlines the projected outcomes on greenhouse gas emissions over the next century, as published by the United Nations Intergovernmental Panel on Climate Change (IPCC). These various projections depend on if and when policy and technology solutions are implemented and correlate with differing estimates for resulting temperature and sea-level increases. The paper then relates the projections to the potential effects on mortality, economics, and available policy options.

Especially relevant to the U.S. economy are the first 2 facts of the 10 presented in the paper: “damages to the U.S. economy grow with temperature change at an increasing rate” and “struggling U.S. counties will be hit hardest by climate change.”

The first section of the paper discusses the first fact by presenting a line chart comparing rising temperatures with projected damages to annual gross domestic product (GDP) during the 2080–2099 period. As the temperature increases, the resulting damage to annual GDP rises quickly. Comparing the chart with the IPCC projections, one can see that a variance exists between about 1-percent damage, in a best-case scenario of 2020 being the peak of greenhouse gas emissions, and about 3-percent damage if emissions continue to rise at their current rate through 2100. The paper points out that, per capita, the difference is more pronounced, with losses to GDP ranging from 2.8 percent to 14.3 percent.

The second fact of the paper states that not all U.S. counties will share the burden evenly. The weight may fall on those counties already economically disadvantaged, and lower income residents without means to relocate will be especially harmed. Counties in the South, where temperatures are higher, will be hit hardest. The paper points to a study that finds as many as 2 million homes in southern coastal regions risk being flooded by 2100. Using labor market, income, and other data, the authors find that the poorest 20 percent of counties may lose around 7 percent of county GDP in a middle-of-the-road scenario. Counties in the richest quintile, however, may lose only slightly more than 1 percent of their GDP.

On a positive note, the paper states that “there are good reasons to believe that substantial emissions reductions are attainable” and that the “high-damage climate outcomes described . . . are not inevitable.” Energy consumed

per dollar of GDP has been declining in the United States in recent years. Because of more efficient energy use from 2007 to 2017, U.S. carbon emissions have declined by 14 percent while output has grown by 16 percent.